Installation Planning

14

Section 14

contains all planning data including the required measures to be carried out on site before the machine is delivered.

The section is divided into

- Construction planning data
- Technical connection and performance data
- Safety instructions

MEDICAL IMAGING

CSO Customer Support Operations

Technical Documentation

Order No.: DD+DIS003.00E

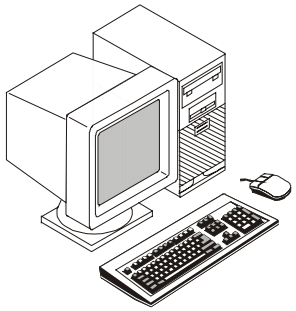
1 Piece QJQ88 Ma1

ADC System Components

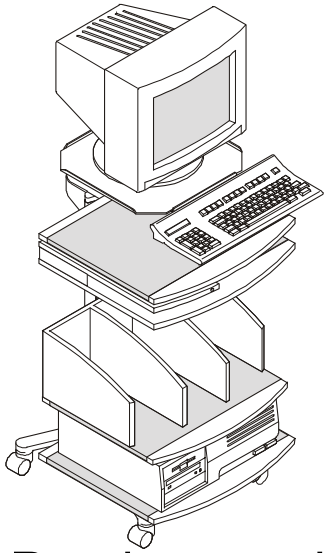
INSTALLATION PLANNING of the ADC System Components:

- ID-and Preview Station
- Processing Station

1st Edition



Processing Station



Preview- and Identification Station

These Installation Planning instructions can also be ordered separately.

Order number: DD+DIS003.00E

printed in Germany

AGFA

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1 General

This document describes the Installation Planning of the ADC ID-Station and the ADC Processing Station.

For the Installation Planning of the ADC Digitizers please refer to the following documents:

ADC Compact Digitizer: DD+DIS294.99E

ADCSolo Digitizer: DD+DIS217.98E

1.1 Safety Instructions

Electrical connections and repairs must only be made by authorised electricians.

Mechanical connections and repairs must only be made by authorised technicians.

For technical data of the commercially available devices as PCs and Workstations please refer to the corresponding user manuals!

1.2 Safety Regulations

- The system component ID Tablet is tested in compliance with:
  - IEC 950/EN 60950: 1992; A1: 1993; A2: 1993; A3: 1995; A4: 1997.

Warning

This equipment generates uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communication.

It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart B of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in an residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Calibration Regulations

Only applies to the Federal Republic of Germany at this time.

Upon installation and maintenance work on the processor the provisions of the X-ray regulations (§ 16 Sec. 1) with respect to the final inspection test by the manufacturer or supplier must be considered.

1.3 System Overview

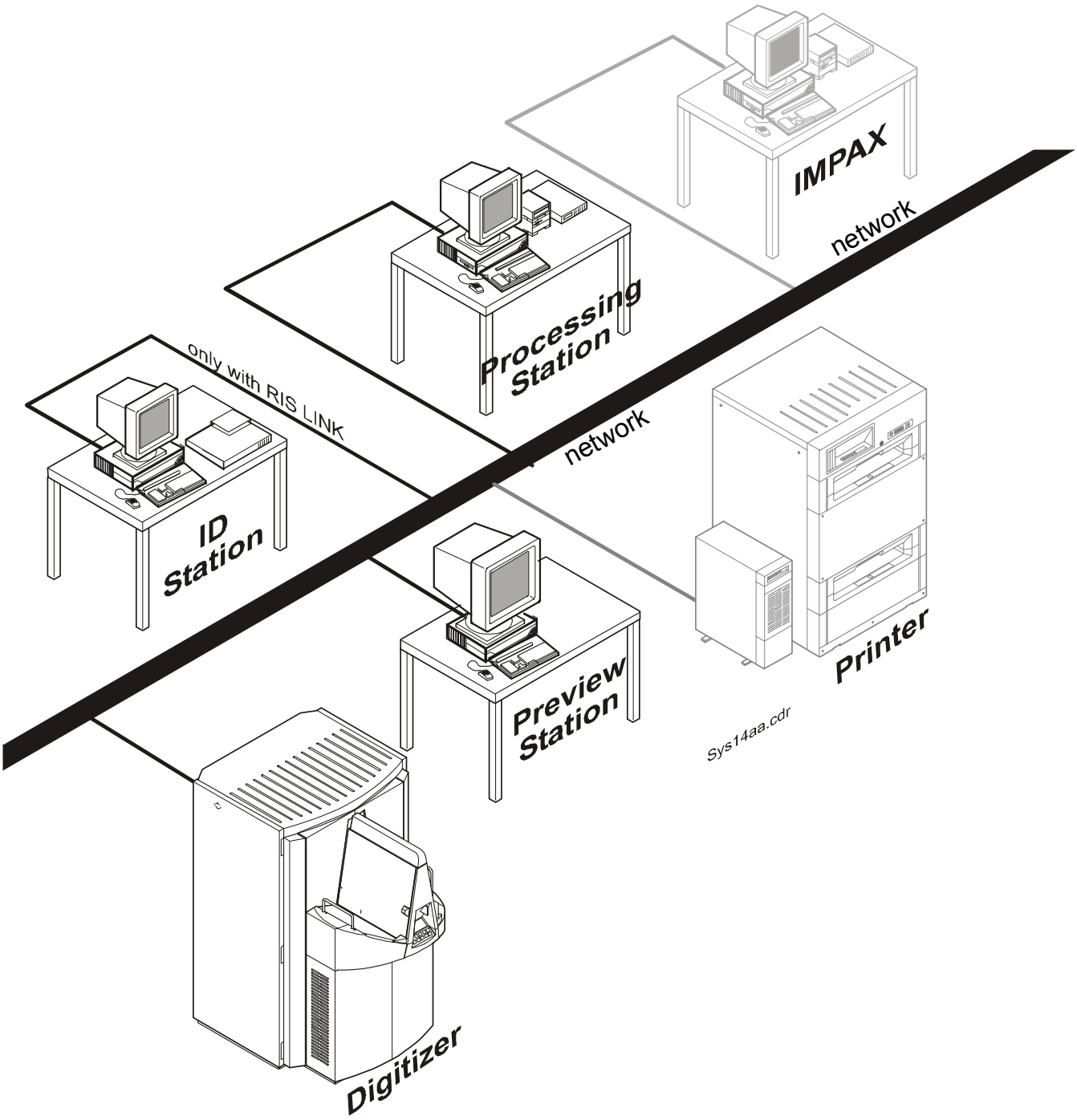
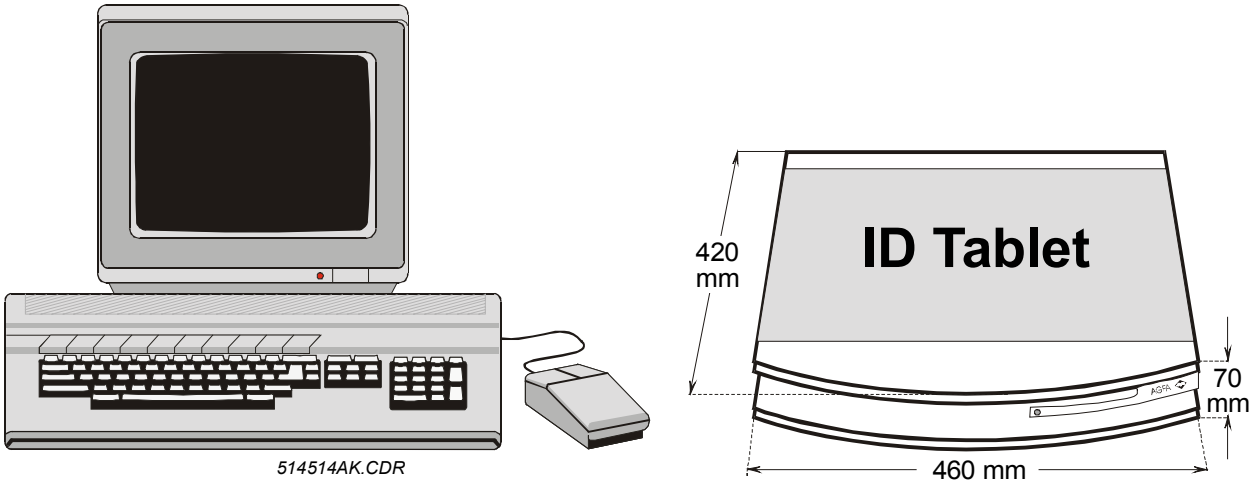


Figure 1

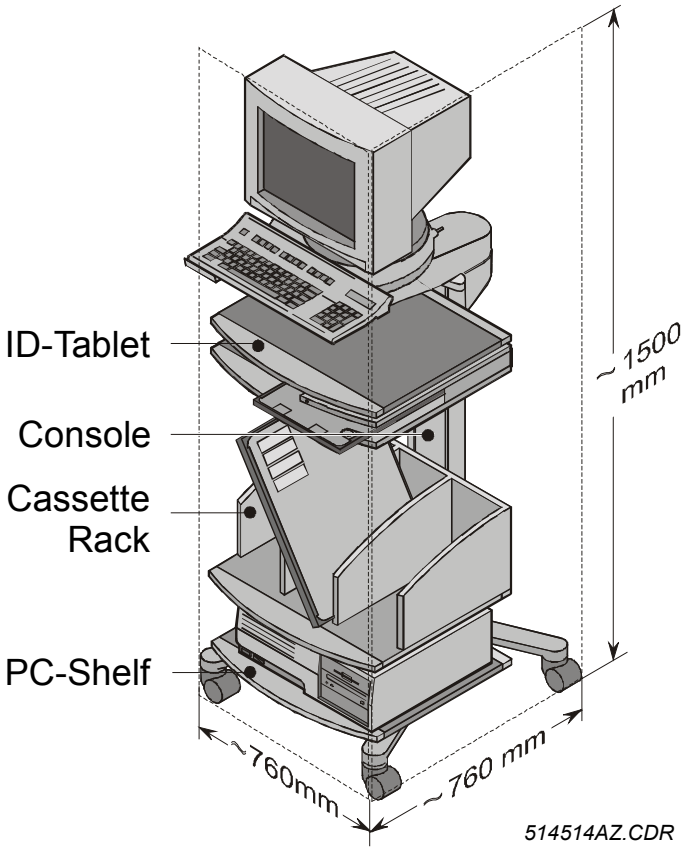
2 Preview and ID Station

2.1 Machine Dimensions Preview and ID Station



- PC: for dimensions refer to the "Technical" Data" of the corresponding PC User Manual.
- Cable length ID-Tablet - PC: 2 m.

2.2 Machine Dimensions ID Station with Console and Cassette Rack



2.3 Technical Data of the ID-Station

2.3.1 ID-Tablet

Environmental Requirements

The ADC System ID-tablet must be installed at a site where the following operating conditions can be provided:

- room temperature: minimum 15°C, maximum 30°C
- relative humidity: at a room temperature of 25 °C, minimal 15 %, maximal 75 %.

Power Requirements

- mains voltage: 100 - 230 V ac
- frequency: 50 - 60 Hz
- max. rated current: 5 A (with appliance outlets loaded to the maximum)
- classification: Class I (earthed)
- fuses: Europe: 5 A slowblow /250V
  North America: 5 A slowblow /125V min
- the equipment is suited for continuous operation.

Power Consumption

ID -STATION	PC incl. Monitor	120V ≈ 3A, 230V ≈ 1,6A
	ID Tablet	≈ 0,5 A
Preview Station	PC incl. Monitor	120V ≈ 3A, 230V ≈ 1,6A

Delivery Modalities

For ID Station and Preview Station the software is separately available (without hardware).

2.4 Minimum Hard- and Software Requirements

- **for the ID - Station and Preview Station:**

Hardware	Software
• Pentium 200 MHz • Internal floppy 3.5", 1.44 MB • Internal CD ROM 644 MB • Monitor 17" SVGA • 48 MB RAM (64 MB recommended) • 512 kB Cache • Hard disk ≥ 1 GB • 64 bit graphical SVGA controller with 2 MB Dram • Countryspecific keyboard + mouse + mouse pad • 1 x RS232 output, reserved for ID Tablet (COM1, 9PIN SUB D),. • Ethernet controller. Recommended 3 COM combo box	**Windows 95/98 / NT installed**

2.5 Electrical Connections

ID - STATION

Mains connection

Connection to an outlet	3 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz
External fuse protection	min. 6 A slowblow, max. 16 A slowblow
Connection cable	Euro: 3 x H05VV - 3 x 1.5 mm², with earthed pin plug, cable length 2.5m US: cable SJT, 3 x AWG 18 with NEMA 5-15P, cable length 2.3m
Interface connections:	1 x RS 232/9P for the ID tablet + 1 x mouse 1 x network connection (Ethernet) for RIS LINK (Option)

PREVIEW - STATION

Mains connection

Connection to an outlet	2 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz
External fuse protection	min. 6 A slowblow, max. 16 A slowblow
Connection cable	Euro: 3 x H05VV - 3 x 1.5 mm², with earthed pin plug, cable length 2.5m US: Cable SJT, 3 x AWG 18 with NEMA 5-15P, cable length 2.3m
Interface connections	1 x network connection (Ethernet) 1 x RS 232/9P, reservation for an ID tablet + 1 x mouse

2.6 Environmental Requirements for the PC:

Temperature:	10° -35°C	50° - 95°F
Humidity:	8 - 90%	

2.7 Packing Dimensions

ID STATION incl. ID Tablet: 17" Monitor: ID Console Rack	L x W x H: 33 x 58 x 55 cm L x W x H: 58 x 58 x 54 cm L x W x H: 84 x 84 x 143 cm L x W x H: 48 x 44 x 29 cm
Preview Station	L x W x H: 58 x 58 x 54 cm

2.8 Weights

ID STATION incl. ID Tablet and Cassette rack	with box: without box:	≈ 13 kg ≈ 9 kg
ID Tablet	with box: without box:	≈13 kg ≈ 9 kg
PREVIEW STATION / ID Station PC	with box: without box:	≈ 25 kg ≈ 20 kg
ID Console	with box: without box:	≈ 43 kg ≈ 21 kg

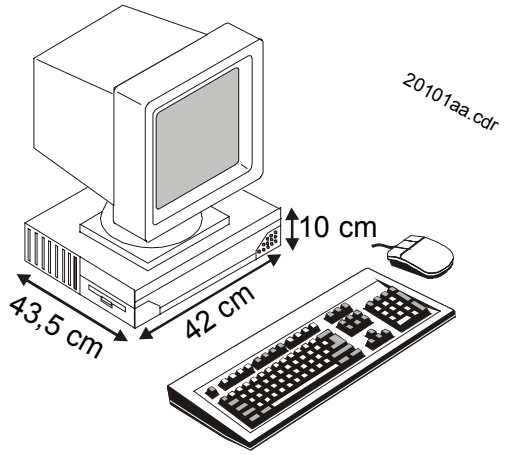
3 Processing Station SUN ULTRA 1

3.1 General

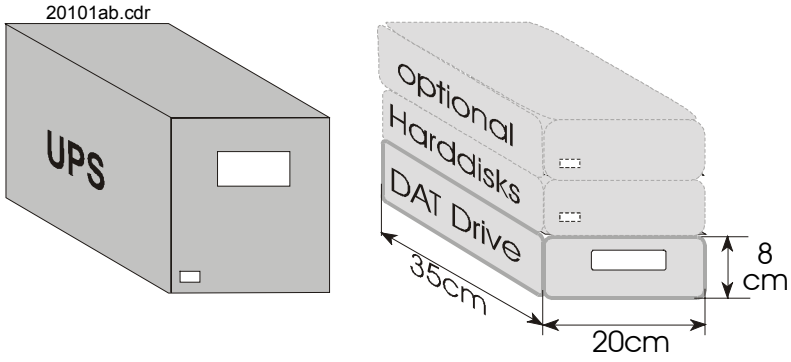
Delivery Modalities

The software releases for the Processing Station are seperately available.

3.2 Machine Dimensions of SUN ULTRA 1



Please consider:
- space on the desk for the external DAT drive (WxDxH ≈20x35x8cm)!
- space on the desk for optional external harddisks (≈ WxDxH ≈20x35x8cm)!
- space on the desk for an UPS module if necessary.



3.3 Transport Path

It must be possible to transport the components of Ultra 1 through all hallways and doors up to the installation site.

Minimum Doorwidth: 60 cm

3.4 Minimum Hardware Requirements for SUN Ultra 1

Hardware

- SUN ULTRA 1
- Monitor 21", grey scale monitor
- Internal floppy 3.5", 1.44 MB
- Internal CD-ROM Drive
- DAT Drive
- Internal Harddisk 1 x 2 GB
- 192 MB RAM (recommended 256 MB)
- Turbo GX video card
- countryspecific keyboard + mouse + mouse pad

network card

3.5 Electrical Connections

Mains Connection of the Processing Station

To avoid data loss and uncontrolled program interruptions in case of mains failure, brief mains interruptions, or overvoltage, we recommend to use an UPS (uninterruptable power supply), which is available as an option. The workstation including monitor and external drives (DAT, harddisks) may be connected to the UPS.

Connection to an outlet *	2 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz
	Each additional external HDD 1 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz
External fuse protection	Minimum 6 A slowblow, maximum 16 A slowblow
connection cable	3 x H05VV - 3 x 1.5 mm² with earthed pin plug, mains cable length approx. 2.3 m
Interface connection	1 x network connection (Ethernet)

***** If UPS is used, only one mains connection is necessary. All other devices are connected to UPS

Power Consumption

- **Processing Station** 120V ≈ 4A, 230V ≈ 2A
  incl. Monitor

Connection Cables of the Individual System Components

If required, the following network connection cables may be ordered separately for the Processing Station.

ABC code	Network cable	Length
3NNDW	thin ethernet cable	5 m
3NNEY	thin ethernet cable	15 m
3NNF1	thin ethernet cable	50 m
3NNG3	thin ethernet cable	100 m
3NM38	thin ethernet MAU (Transceiver)	
3NM5D	ethernet drop cable	5 m
3NM6F	ethernet drop cable	20 m
3NM7H	thin ethernet terminator kit	
31D3F	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	5 m
31D4H	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	50 m
31D5K	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	100 m

The Ethernet cables of the system components should be positioned on the floor or along the wall in a cable duct.

3.6 Packing Dimensions

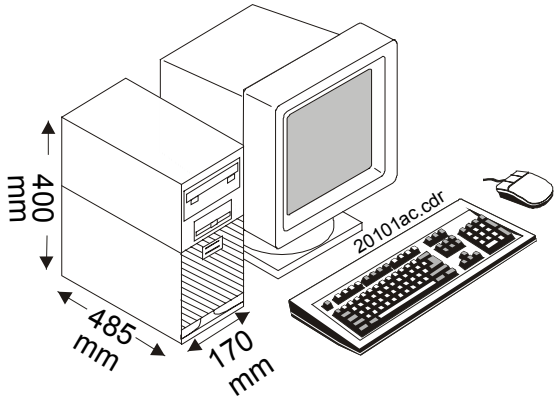
Processing Station incl. standard brightness monitor	2 x L x W x H: 80 x 120 x 90 cm
Processing Station incl. high brightness monitor	2 x L x W x H: 80 x 120 x 90 cm

3.7 Weights

Processing Station with standard monitor	with box: without box:	≈ 80 kg ≈ 60 kg
Processing Station with high brightness monitor	with box: without box:	2 x ≈ 50 kg 2 x ≈ 30 kg

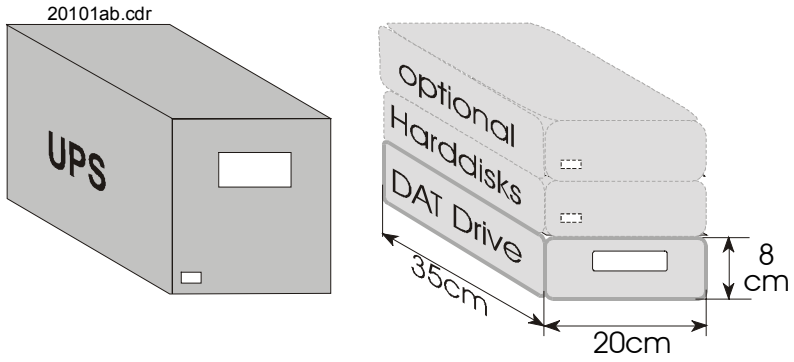
4 Processing Station Sun Ultra 10

4.1 Machine Dimensions



Please consider:

- space on the desk for the external dat drive (WxDxH ≈20x35x8cm)!
- space on the desk for optional external harddisks (≈ WxDxH ≈20x35x8cm)!
- space on the desk for an UPS module if necessary.



4.2 Transport Path

It must be possible to transport the components of Ultra 10 through all hallways and doors up to the installation site.

Minimum Doorwidth: 60 cm

4.3 Electrical Connections

Mains Connection of the Processing Station

To avoid data loss and uncontrolled program interruptions in case of mains failure, brief mains interruptions, or overvoltage, we recommend to use an UPS (uninterruptable power supply), which

is available as an option. The workstation including monitor and external drives (DAT, harddisks) may be connected to the UPS.

Connection to an outlet *	3 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz,
	each additional external HDD 1 x 100 - 120 V / 230 - 240 V, 50 - 60 Hz,
External fuse protection	minimum 6 A slowblow, maximum 16 A slowblow
Connection cable	3 x H05VV - 3 x 1.5 mm² with earthed pin plug, mains cable length approx. 2.3 m
Interface connection	1 x network connection (Ethernet)

***** If UPS is used, only one mains connection is necessary. All other devices are connected to UPS

Power Consumption

- **Processing Station** 120V ≈ 4A, 230V ≈ 2A incl. Monitor

Connection Cables of the Individual System Components

If required, the following network connection cables may be ordered separately

for the Processing Station.

ABC code	Network cable	Length
3NNDW	thin ethernet cable	5 m
3NNEY	thin ethernet cable	15 m
3NNF1	thin ethernet cable	50 m
3NNG3	thin ethernet cable	100 m
3NM38	thin ethernet MAU (Transceiver)	
3NM5D	ethernet drop cable	5 m
3NM6F	ethernet drop cable	20 m
3NM7H	thin ethernet terminator kit	
31D3F	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	5 m
31D4H	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	50 m
31D5K	UTP-cable, (unshielded twisted pair connection cable for ethernet 10 base-T)	100 m

The Ethernet cables of the system components should be positioned on the floor or along the wall in a cable duct.

4.4 Specifications

Delivery Modalities

The software releases for the Processing Station are seperately available.

Minimum Hardware Requirements for SUN ULTRA 10

- 300 MHz ULTRA CPU
- 128 MB RAM (256 MB RAM available since April 99)
- 512 Kb Cache
- Monitor 21", grey scale monitor
- Internal floppy 3.5", 1.44 MB
- Internal EIDE CD ROM drive 24x
- DAT Drive
- Internal EIDE harddisk 1 x 4,3 GB
- 10/100Mb onboard Ethernet connection (RJ45, auto sensing)
  - ☞ **Network connector: RJ45 for Twisted pair.**
    For connection to BNC a HUB is necessary.
- onboard graphic board
- countryspecific keyboard + mouse + mouse pad
- PCI-SCSI Interface (Wide SCSI board), single ended, for tape streamer and additional external SCSI hard disks with two

SCSI cables included.

4.5 Packing Dimensions

Processing Station incl. standard brightness monitor	2 x L x W x H: 80 x 120 x 90 cm
Processing Station incl. high brightness monitor	2 x L x W x H: 80 x 120 x 90 cm

4.6 Weights

Processing Station with standard monitor	with box: without box:	≈ 80 kg ≈ 60 kg
Processing Station with high brightness monitor	with box: without box:	2 x ≈ 50 kg 2 x ≈ 30 kg

5 Technical Data of AGFA – Monitors

5.1 Standard Brightness Monitor

Syncronization	Horizontal scan rate	48 to 108 kHz (automatic adjustment)
	Vertical scan rate	60 to 80 Hz (automatic adjustment)
Input Signals	ECL digital	D-Sub 25 pin connector (1, 2 or 4 bits per pixel)
	Analog	3 BNC connector (composite on video or seperate sync.) 13W3 and other connectors optional
CRT	Screen size	21“ FS
	Phosphor	P104 (other options available)
	Non-glare AR panel	Optional
	Display mode	Non-interlaced
Display Area	Horizontal width	16“ max (user adjustable)
	Vertical height	12“ max (user adjustable)
Video	Video band width	200 MHz (up to 300 MHz optional)
Resolution	Horizontal	1024 to 2048
	Vertical	768 to 1536
	Brightness	65 Footlamberts nominal HRMS™ allows the monitor to adjust automatically to a range of horizontal and vertical scan frequencies, providing compatibility with many hi-res display controllers for PC, PS/2, MAC, Sun, Apollo, DEC, Silicon Graphics and other workstations.
User Controls	Side	Power, Brightness and Contrast Controls
	Rear	Height, vertical position, width, horizontal position
Dimensions	Height	16.5“ (19“ with tilt-swivel base)
	Width	19.5“
	Depth	19“
	Weight	48 lbs. (55 lbs with tilt-swivel base)
Power Supply	Power consumption	100 Watts
	Input voltage	90 to 130 VAC, 220 to 250 VAC
	Input frequency	47 to 63 Hz

5.2 High Brightness Monitor

	Greyscale Monitor	SMM 2183 L
Power Requirements	Input voltage	90 – 264 V wide range power supply
	Power frequency	47 – 65 Hz
	Power consumption	150 Watts max.
	Power factor control	According to IEC 1000
	Power saving	According to VESA DPMS
CRT Specifications	Size	21“ flat square
	Deflection angle	90 °
	Light transmission	30 %
	Phosphor type	P45, cadmium free
	Surface	Multicoated conductive panel (AR / AS)
	Gun system	Dispenser cathode (long life)
	Focusing	Static and dynamic
General Performance	Horizontal frequency	30 to 83 kHz
	Vertical frequency	50 to 120 Hz
	Formats	19 max., self recognizing and autosensing
Display Performance	Display Area (W x H)	400 mm x 300 mm
	Non-linearity	≤ 2 %
	Raster stability	0.05 mm max. swim & jitter
	Maximum brightness	≥ 175 ftL @ 1 V_{pp} input signal
	High voltage regulation	0.2 % max. size change
Video Amplifier, Inuts	Bandwidth	140 MHz @ 80 V modulation
	Rise & fall times	3 ns
	Connectors	BNC type
	Impedance	75 Ohms
	Video level	0.75 to 1.2 V_{pp}
	Sync. level	0.1 to 0.6 V_{pp}
Front Panel Controls	Controls	Power on / off, contrast / brightness
	Geometry	H/V-phase, H / V-amplitude, pin & barrel, raster rotation
	Ambient light sensor	For automatic contrast control

Operating Conditions	Temperature operating	+10 °C to +35 °C
	Storage	-25 °C to +70 °C
	Humidity operating	20 % to 80 % rel. humidity
	Storage	20 % to 80 % rel. humidity
Mechanical Specifications	Dimensions (WxDxH)	499 mm x 520 mm x 476 mm
	Weight	≈ 30.5 kg
Approvals	Safety	UL 1950, CSA, IEC 950, EN 60 950, DHHS
	EMC	IEC 601-1-2
	Radiation	MPR II
	Others	CE mark, TÜV-ergo (optional), ISO 9001 certified plant